

# Appendix 3A-6: Water Year 2008–2012 Annual Total Phosphorus Criteria Compliance Assessment

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This appendix presents the annual total phosphorous criteria compliance assessment for Water Year 2008 through Water Year 2012 (WY2008–WY2012)(May 1, 2007–April 20, 2012). **Table 1** displays the annual total phosphorous (TP) criteria compliance for the five water year period within the Everglades Protection Area (EPA), which include Arthur R. Marshall Loxahatchee National Wildlife Refuge [Refuge, also known as Water Conservation Area 1 (WCA-1)], Water Conservation Areas 2 and 3 (WCA-2 and WCA-3, respectively), and Everglades National Park (ENP or Park). **Figure 1** depicts each area's network average geometric mean from WY2005 to the most current water year relative to the 11 microgram per liter ( $\mu\text{g/L}$ ) network limit, and the 10  $\mu\text{g/L}$  long-term limit. **Figure 2** depicts the current water year (WY2012) annual geometric mean for each station within its respective area and network (impacted and unimpacted) relative to the 15  $\mu\text{g/L}$  annual limit, stations with insufficient data are identified with an asterisk (\*).

Interior marsh monitoring stations during WY2012 exhibited:

- Annual geometric mean total phosphorous concentrations ranged from less than 3  $\mu\text{g/L}$  in some unimpacted portions of the marsh to 49  $\mu\text{g/L}$  at a Refuge site that is highly influenced by canal inputs
- 71 percent of the interior marsh sites exhibited annual geometric mean TP concentrations of 10  $\mu\text{g/L}$  or less
- 88 percent of the interior sites had annual geometric mean TP concentrations of 15  $\mu\text{g/L}$  or less during WY2012

The increased percent of sites meeting the 10 and 15  $\mu\text{g/L}$  limits observed for WY2012 reflects the continued recovery from recent climatic extremes, improved treatment of the inflows, and overall improvement in phosphorus conditions within the interior marsh due to restoration activities.

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**Table 1.** Annual total phosphorus criteria compliance assessment for the five-year period from Water Years 2008–2012 (WY2008–WY2012)(May 1, 2007–April 30, 2012).

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail	
Refuge	Impacted	2008	LOXA101	9	14	Pass					
	Impacted	2008	LOXA105	10	14.6	Pass					
	Impacted	2008	LOXA124	10	13	Pass					
	Impacted	2008	LOXA130	11	11.1	Pass					
	Impacted	2008	LOXA137	12	9.5	Pass					
	Impacted	2008	LOXA140	8	7.8	Pass					
	Impacted	2008	X1	8	54.9	Fail					
	Impacted	2008	Z1	8	54.7	Fail					
	<b>Impacted</b>	<b>2008</b>	<b>Annual Network Average</b>					<b>22.5</b>	<b>Fail</b>		
	Impacted	2009	LOXA101	8	9.6	Pass					
	Impacted	2009	LOXA105	9	11.5	Pass					
	Impacted	2009	LOXA124	9	13	Pass					
	Impacted	2009	LOXA130	10	9.7	Pass					
	Impacted	2009	LOXA137	9	9.7	Pass					
	Impacted	2009	LOXA140	8	8.4	Pass					
	Impacted	2009	X1	10	60.9	Fail					
	Impacted	2009	Z1	12	27.6	Fail					
	<b>Impacted</b>	<b>2009</b>	<b>Annual Network Average</b>					<b>18.8</b>	<b>Fail</b>		
	Impacted	2010	LOXA101	11	13	Pass					
	Impacted	2010	LOXA105	11	12.1	Pass					
	Impacted	2010	LOXA124	11	12.5	Pass					
	Impacted	2010	LOXA130	11	10.3	Pass					
	Impacted	2010	LOXA137	11	10.7	Pass					
	Impacted	2010	LOXA140	11	10.8	Pass					
	Impacted	2010	X1	12	35.3	Fail					
	Impacted	2010	Z1	12	25.5	Fail					
	<b>Impacted</b>	<b>2010</b>	<b>Annual Network Average</b>					<b>16.3</b>	<b>Fail</b>		
	Impacted	2011	LOXA101	6	11.1	Pass					
	Impacted	2011	LOXA105	9	13.1	Pass					
	Impacted	2011	LOXA124	10	9.8	Pass					
	Impacted	2011	LOXA130	10	10.3	Pass					
	Impacted	2011	LOXA137	10	10.8	Pass					
	Impacted	2011	LOXA140	7	8.9	Pass					
	Impacted	2011	X1	11	26.7	Fail					
	Impacted	2011	Z1	12	32.8	Fail					
	<b>Impacted</b>	<b>2011</b>	<b>Annual Network Average</b>					<b>15.4</b>	<b>Fail</b>		

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail	
	Impacted	2012	LOXA101	4	N/A (14.3)	N/A	23.9	Fail	19.1	Fail	
	Impacted	2012	LOXA105	7	17.5	Fail					
	Impacted	2012	LOXA124	8	10.9	Pass					
	Impacted	2012	LOXA130	8	13	Pass					
	Impacted	2012	LOXA137	6	14.7	Pass					
	Impacted	2012	LOXA140	4	N/A (12.6)	N/A					
	Impacted	2012	X1	8	38	Fail					
	Impacted	2012	Z1	7	49.3	Fail					
	<b>Impacted</b>	<b>2012</b>	<b>Annual Network Average</b>								
	<b>Impacted</b>	<b>2008 - 2012</b>	<b>Five-Year Network Average</b>								
	<b>Impacted</b>	<b>2008 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>								
Refuge	Unimpacted	2008	LOX10	9	8.3	Pass	8.2	Pass			
	Unimpacted	2008	LOX11	12	7.3	Pass					
	Unimpacted	2008	LOX12	10	7.8	Pass					
	Unimpacted	2008	LOX13	10	7.2	Pass					
	Unimpacted	2008	LOX14	11	6.9	Pass					
	Unimpacted	2008	LOX15	10	7.5	Pass					
	Unimpacted	2008	LOX16	10	7.6	Pass					
	Unimpacted	2008	LOX3	10	8.7	Pass					
	Unimpacted	2008	LOX4	10	9.6	Pass					
	Unimpacted	2008	LOX5	10	7.9	Pass					
	Unimpacted	2008	LOX6	10	5.6	Pass					
	Unimpacted	2008	LOX7	10	7.8	Pass					
	Unimpacted	2008	LOX8	11	10.1	Pass					
	Unimpacted	2008	LOX9	10	8	Pass					
	Unimpacted	2008	LOXA108	9	7.9	Pass					
	Unimpacted	2008	X4	14	12.2	Pass					
	<b>Unimpacted</b>	<b>2008</b>	<b>Annual Network Average</b>								
	Unimpacted	2009	LOX10	8	8	Pass					
	Unimpacted	2009	LOX11	12	6.7	Pass					
	Unimpacted	2009	LOX12	12	6.8	Pass					
	Unimpacted	2009	LOX13	12	7	Pass					
	Unimpacted	2009	LOX14	12	6.4	Pass					
	Unimpacted	2009	LOX15	12	6.8	Pass					
	Unimpacted	2009	LOX16	12	7.7	Pass					
	Unimpacted	2009	LOX3	7	8.4	Pass					
	Unimpacted	2009	LOX4	8	9.5	Pass					
Unimpacted	2009	LOX5	7	7.5	Pass						
Unimpacted	2009	LOX6	10	7.6	Pass						

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail	
	Unimpacted	2009	LOX7	12	8.4	Pass					
	Unimpacted	2009	LOX8	12	11.3	Pass					
	Unimpacted	2009	LOX9	8	5.4	Pass					
	Unimpacted	2009	LOXA108	8	9.3	Pass					
	Unimpacted	2009	X4	11	11.3	Pass					
	<b>Unimpacted</b>	<b>2009</b>	<b>Annual Network Average</b>					<b>8.0</b>	<b>Pass</b>		
	Unimpacted	2010	LOX10	11	6.7	Pass					
	Unimpacted	2010	LOX11	11	6.2	Pass					
	Unimpacted	2010	LOX12	12	8.3	Pass					
	Unimpacted	2010	LOX13	11	6.3	Pass					
	Unimpacted	2010	LOX14	11	6.6	Pass					
	Unimpacted	2010	LOX15	11	6.6	Pass					
	Unimpacted	2010	LOX16	11	7.2	Pass					
	Unimpacted	2010	LOX3	9	8.1	Pass					
	Unimpacted	2010	LOX4	11	10.2	Pass					
	Unimpacted	2010	LOX5	9	7.7	Pass					
	Unimpacted	2010	LOX6	11	5.2	Pass					
	Unimpacted	2010	LOX7	11	7.5	Pass					
	Unimpacted	2010	LOX8	11	9.8	Pass					
	Unimpacted	2010	LOX9	11	6.6	Pass					
	Unimpacted	2010	LOXA108	11	8	Pass					
	Unimpacted	2010	X4	12	9	Pass					
	<b>Unimpacted</b>	<b>2010</b>	<b>Annual Network Average</b>					<b>7.5</b>	<b>Pass</b>		
	Unimpacted	2011	LOX10	8	5.7	Pass					
	Unimpacted	2011	LOX11	12	6	Pass					
	Unimpacted	2011	LOX12	12	6.4	Pass					
	Unimpacted	2011	LOX13	11	5.8	Pass					
	Unimpacted	2011	LOX14	12	6	Pass					
	Unimpacted	2011	LOX15	12	6.1	Pass					
	Unimpacted	2011	LOX16	12	7.3	Pass					
	Unimpacted	2011	LOX3	7	6.3	Pass					
	Unimpacted	2011	LOX4	8	9.5	Pass					
	Unimpacted	2011	LOX5	7	7	Pass					
	Unimpacted	2011	LOX6	10	5.8	Pass					
	Unimpacted	2011	LOX7	10	6.3	Pass					
	Unimpacted	2011	LOX8	11	8.2	Pass					
	Unimpacted	2011	LOX9	8	5.1	Pass					
	Unimpacted	2011	LOXA108	7	6.4	Pass					
	Unimpacted	2011	X4	11	10.2	Pass					

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail
	<b>Unimpacted</b>	<b>2011</b>	<b>Annual Network Average</b>				<b>6.8</b>	<b>Pass</b>		
	Unimpacted	2012	LOX10	5	N/A (9.3)	N/A				
	Unimpacted	2012	LOX11	9	7.4	Pass				
	Unimpacted	2012	LOX12	10	8.1	Pass				
	Unimpacted	2012	LOX13	6	7.1	Pass				
	Unimpacted	2012	LOX14	9	7.3	Pass				
	Unimpacted	2012	LOX15	10	7	Pass				
	Unimpacted	2012	LOX16	9	8.2	Pass				
	Unimpacted	2012	LOX3	2	N/A (5.9)	N/A				
	Unimpacted	2012	LOX4	8	12.1	Pass				
	Unimpacted	2012	LOX5	3	N/A (7.2)	N/A				
	Unimpacted	2012	LOX6	9	6.2	Pass				
	Unimpacted	2012	LOX7	9	8	Pass				
	Unimpacted	2012	LOX8	8	10.4	Pass				
	Unimpacted	2012	LOX9	5	N/A (6.7)	N/A				
	Unimpacted	2012	LOXA108	4	N/A (7.7)	N/A				
	Unimpacted	2012	X4	9	9.1	Pass				
	<b>Unimpacted</b>	<b>2012</b>	<b>Annual Network Average</b>				<b>8.3</b>	<b>Pass</b>		
<b>Unimpacted</b>	<b>2008 - 2012</b>	<b>Five-Year Network Average</b>						<b>7.7</b>	<b>Pass</b>	
<b>Unimpacted</b>	<b>2008 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>				<b>Pass</b>				
WCA2	Impacted	2008	404Z1	8	27	Fail				
	Impacted	2008	CA223	6	25.9	Fail				
	Impacted	2008	CA224	9	8.4	Pass				
	Impacted	2008	F1	21	36.1	Fail				
	Impacted	2008	F3	11	18.3	Fail				
	Impacted	2008	F4	23	13.8	Pass				
	Impacted	2008	N1	10	20.1	Fail				
	<b>Impacted</b>	<b>2008</b>	<b>Annual Network Average</b>				<b>21.4</b>	<b>Fail</b>		
	Impacted	2009	404Z1	6	17.7	Fail				
	Impacted	2009	CA223	4	N/A (15.9)	N/A				
	Impacted	2009	CA224	7	5.8	Pass				
	Impacted	2009	F1	18	36.7	Fail				
	Impacted	2009	F3	11	20	Fail				
	Impacted	2009	F4	17	12.9	Pass				
	Impacted	2009	N1	7	13.9	Pass				
	<b>Impacted</b>	<b>2009</b>	<b>Annual Network Average</b>				<b>17.8</b>	<b>Fail</b>		
	Impacted	2010	404Z1	10	20.8	Fail				
	Impacted	2010	CA223	8	21.1	Fail				
Impacted	2010	CA224	11	6.6	Pass					

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail					
	Impacted	2010	F1	13	24	Fail									
	Impacted	2010	F3	13	12.5	Pass									
	Impacted	2010	F4	13	11.3	Pass									
	Impacted	2010	N1	11	22.2	Fail									
	<b>Impacted</b>	<b>2010</b>	<b>Annual Network Average</b>					<b>16.9</b>	<b>Fail</b>						
	Impacted	2011	404Z1	9	20.6	Fail									
	Impacted	2011	CA223	7	17.2	Fail									
	Impacted	2011	CA224	8	6.2	Pass									
	Impacted	2011	F1	10	19.1	Fail									
	Impacted	2011	F3	7	14.5	Pass									
	Impacted	2011	F4	8	9.1	Pass									
	Impacted	2011	N1	7	16.9	Fail									
	<b>Impacted</b>	<b>2011</b>	<b>Annual Network Average</b>									<b>14.8</b>	<b>Fail</b>		
	Impacted	2012	404Z1	8	15	Pass									
	Impacted	2012	CA223	5	N/A (40.7)	N/A									
	Impacted	2012	CA224	8	6.7	Pass									
	Impacted	2012	F1	8	23.4	Fail									
	Impacted	2012	F3	8	14.6	Pass									
	Impacted	2012	F4	10	10.1	Pass									
	Impacted	2012	N1	10	13.6	Pass									
<b>Impacted</b>	<b>2012</b>	<b>Annual Network Average</b>					<b>13.9</b>	<b>Fail</b>							
<b>Impacted</b>	<b>2008 - 2012</b>	<b>Five-Year Network Average</b>							<b>17.0</b>	<b>Fail</b>					
<b>Impacted</b>	<b>2008 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>					<b>Fail</b>								
<b>WCA2</b>	Unimpacted	2008	404C2	9	8.5	Pass									
	Unimpacted	2008	CA217	10	6.3	Pass									
	Unimpacted	2008	CA222	10	5.8	Pass									
	Unimpacted	2008	CA26	9	5.3	Pass									
	Unimpacted	2008	CA29	22	6.4	Pass									
	Unimpacted	2008	E5	14	6.9	Pass									
	Unimpacted	2008	F5	13	8.3	Pass									
	Unimpacted	2008	U1	17	9.6	Pass									
	Unimpacted	2008	U3	14	7.2	Pass									
	<b>Unimpacted</b>	<b>2008</b>	<b>Annual Network Average</b>					<b>7.1</b>	<b>Pass</b>						
	Unimpacted	2009	404C2	7	8.4	Pass									
	Unimpacted	2009	CA217	8	4.9	Pass									
	Unimpacted	2009	CA222	7	4.4	Pass									
	Unimpacted	2009	CA26	8	4.8	Pass									
	Unimpacted	2009	CA29	16	4.8	Pass									
Unimpacted	2009	E5	11	5.6	Pass										

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail				
	Unimpacted	2009	F5	11	7.9	Pass								
	Unimpacted	2009	U1	13	8.2	Pass								
	Unimpacted	2009	U3	13	9.5	Pass								
	<b>Unimpacted</b>	<b>2009</b>	<b>Annual Network Average</b>								<b>6.5</b>	<b>Pass</b>		
	Unimpacted	2010	404C2	9	9.8	Pass								
	Unimpacted	2010	CA217	11	4.5	Pass								
	Unimpacted	2010	CA222	11	4.8	Pass								
	Unimpacted	2010	CA26	10	4.5	Pass								
	Unimpacted	2010	CA29	11	4.7	Pass								
	Unimpacted	2010	E5	15	6.2	Pass								
	Unimpacted	2010	F5	15	5.9	Pass								
	Unimpacted	2010	U1	15	6.2	Pass								
		2010	U3	13	4.8	Pass								
	<b>Unimpacted</b>	<b>2010</b>	<b>Annual Network Average</b>								<b>5.7</b>	<b>Pass</b>		
	Unimpacted	2011	404C2	4	N/A (6.7)	N/A								
	Unimpacted	2011	CA217	11	5.1	Pass								
	Unimpacted	2011	CA222	9	4.4	Pass								
	Unimpacted	2011	CA26	8	4.5	Pass								
	Unimpacted	2011	CA29	9	4.9	Pass								
	Unimpacted	2011	E5	10	4.6	Pass								
	Unimpacted	2011	F5	9	5.5	Pass								
	Unimpacted	2011	U1	11	5.4	Pass								
	Unimpacted	2011	U3	10	4.3	Pass								
	<b>Unimpacted</b>	<b>2011</b>	<b>Annual Network Average</b>								<b>4.8</b>	<b>Pass</b>		
	Unimpacted	2012	404C2	8	7.4	Pass								
	Unimpacted	2012	CA217	9	5.4	Pass								
	Unimpacted	2012	CA222	8	4.4	Pass								
	Unimpacted	2012	CA26	9	4.3	Pass								
	Unimpacted	2012	CA29	10	5.4	Pass								
	Unimpacted	2012	E5	9	5.8	Pass								
Unimpacted	2012	F5	9	5.5	Pass									
Unimpacted	2012	U1	10	7.2	Pass									
Unimpacted	2012	U3	9	4.9	Pass									
<b>Unimpacted</b>	<b>2012</b>	<b>Annual Network Average</b>				<b>5.6</b>	<b>Pass</b>							
<b>Unimpacted</b>	<b>2008 - 2012</b>	<b>Five-Year Network Average</b>						<b>6.0</b>	<b>Pass</b>					
<b>Unimpacted</b>	<b>2008 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>				<b>Pass</b>								
<b>WCA3</b>	Impacted	2008	CA314	11	7.3	Pass								
	Impacted	2008	CA324	1	N/A (14)	N/A								
	Impacted	2008	CA33	7	14.4	Pass								

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WCA3	Impacted	2008	CA35	6	8	Pass									
	Impacted	2008	CA36	6	35.7	Fail									
	<b>Impacted</b>	<b>2008</b>	<b>Annual Network Average</b>					<b>16.4</b>	<b>Fail</b>						
	Impacted	2009	CA314	12	4.3	Pass									
	Impacted	2009	CA324	6	11.1	Pass									
	Impacted	2009	CA33	14	8.4	Pass									
	Impacted	2009	CA35	11	6.9	Pass									
	Impacted	2009	CA36	15	23.1	Fail									
	<b>Unimpacted</b>	<b>2009</b>	<b>Annual Network Average</b>									<b>10.76</b>	<b>Pass</b>		
	Impacted	2010	CA314	12	4.5	Pass									
	Impacted	2010	CA324	5	N/A (12.5)	N/A									
	Impacted	2010	CA33	8	8.8	Pass									
	Impacted	2010	CA35	5	N/A (7.1)	N/A									
	Impacted	2010	CA36	8	23.6	Fail									
	<b>Impacted</b>	<b>2010</b>	<b>Annual Network Average</b>					<b>12.3</b>	<b>Fail</b>						
	Impacted	2011	CA314	10	4	Pass									
	Impacted	2011	CA324	4	N/A (10.4)	N/A									
	Impacted	2011	CA33	7	7.5	Pass									
	Impacted	2011	CA35	6	5.6	Pass									
	Impacted	2011	CA36	9	22	Fail									
	<b>Unimpacted</b>	<b>2011</b>	<b>Annual Network Average</b>									<b>9.8</b>	<b>Pass</b>		
	Impacted	2012	CA314	10	6.4	Pass									
	Impacted	2012	CA324	5	N/A (9.7)	N/A									
	Impacted	2012	CA33	5	N/A (8)	N/A									
	Impacted	2012	CA35	3	N/A (5.9)	N/A									
	Impacted	2012	CA36	6	30.9	Fail									
	<b>Impacted</b>	<b>2012</b>	<b>Annual Network Average</b>					<b>18.7</b>	<b>Fail</b>						
	<b>Impacted</b>	<b>2008 - 2012</b>	<b>Five-Year Network Average</b>							<b>12.9</b>	<b>Fail</b>				
<b>Impacted</b>	<b>2008 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>					<b>Fail</b>								
WCA3	Unimpacted	2008	3ASMESO	16	7.3	Pass									
	Unimpacted	2008	CA311	21	6.9	Pass									
	Unimpacted	2008	CA315	22	7.9	Pass									
	Unimpacted	2008	CA316	19	10.8	Pass									
	Unimpacted	2008	CA319	10	6.8	Pass									
	Unimpacted	2008	CA32	8	7.5	Pass									
	Unimpacted	2008	CA325	6	5.6	Pass									
	Unimpacted	2008	CA34	9	14.5	Pass									
Unimpacted	2008	CA38	13	6.6	Pass										

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail
	Unimpacted	2008	CA39	10	6.8	Pass				
	Unimpacted	2008	CA3B1	10	6	Pass				
	Unimpacted	2008	CA3B2	8	7.6	Pass				
	Unimpacted	2008	S345B6	12	7.4	Pass				
	<b>Unimpacted</b>	<b>2008</b>	<b>Annual Network Average</b>				<b>7.8</b>	<b>Pass</b>		
	Unimpacted	2009	3ASMESO	16	4.6	Pass				
	Unimpacted	2009	CA311	18	4.7	Pass				
	Unimpacted	2009	CA315	19	4.9	Pass				
	Unimpacted	2009	CA316	19	6.3	Pass				
	Unimpacted	2009	CA319	12	4.5	Pass				
	Unimpacted	2009	CA32	17	5.7	Pass				
	Unimpacted	2009	CA325	7	4.6	Pass				
	Unimpacted	2009	CA34	16	6.8	Pass				
	Unimpacted	2009	CA38	15	4.9	Pass				
	Unimpacted	2009	CA39	11	4.8	Pass				
	Unimpacted	2009	CA3B1	10	3.6	Pass				
	Unimpacted	2009	CA3B2	11	4.6	Pass				
	Unimpacted	2009	S345B6	17	4.5	Pass				
	<b>Unimpacted</b>	<b>2009</b>	<b>Annual Network Average</b>				<b>5.0</b>	<b>Pass</b>		
	Unimpacted	2010	3ASMESO	15	4.4	Pass				
	Unimpacted	2010	CA311	10	4	Pass				
	Unimpacted	2010	CA315	10	4.3	Pass				
	Unimpacted	2010	CA316	10	6.4	Pass				
	Unimpacted	2010	CA319	11	4.7	Pass				
	Unimpacted	2010	CA32	11	4.9	Pass				
	Unimpacted	2010	CA325	11	4.6	Pass				
	Unimpacted	2010	CA34	10	7	Pass				
	Unimpacted	2010	CA38	9	4.4	Pass				
	Unimpacted	2010	CA39	11	4.9	Pass				
	Unimpacted	2010	CA3B1	10	3.4	Pass				
	Unimpacted	2010	CA3B2	11	4.4	Pass				
	Unimpacted	2010	S345B6	12	3.6	Pass				
	<b>Unimpacted</b>	<b>2010</b>	<b>Annual Network Average</b>				<b>4.7</b>	<b>Pass</b>		
	Unimpacted	2011	3ASMESO	9	3.5	Pass				

Area	Criterion Network	Water Year	Station	Sample Size (N)	Annual Site Geometric Mean (µg/L)	≤15 µg/L Pass/ Fail	Network Annual Average Geometric Mean (µg/L)	≤11 µg/L Pass/ Fail	Network Five-Year Average Geometric Mean (µg/L)	≤10 µg/L Pass/ Fail	
	Unimpacted	2011	CA311	10	4.3	Pass					
	Unimpacted	2011	CA315	11	4.3	Pass					
	Unimpacted	2011	CA316	10	6	Pass					
	Unimpacted	2011	CA319	10	4.4	Pass					
	Unimpacted	2011	CA32	7	4.8	Pass					
	Unimpacted	2011	CA325	6	4.6	Pass					
	Unimpacted	2011	CA34	8	5.4	Pass					
	Unimpacted	2011	CA38	8	3.5	Pass					
	Unimpacted	2011	CA39	8	4.3	Pass					
	Unimpacted	2011	CA3B1	9	3.2	Pass					
	Unimpacted	2011	CA3B2	10	3.3	Pass					
	Unimpacted	2011	S345B6	10	3	Pass					
	<b>Unimpacted</b>	<b>2011</b>	<b>Annual Network Average</b>					<b>4.2</b>	<b>Pass</b>		
	Unimpacted	2012	3ASMESO	9	5.3	Pass					
	Unimpacted	2012	CA311	8	4.8	Pass					
	Unimpacted	2012	CA315	9	5.3	Pass					
	Unimpacted	2012	CA316	8	6.9	Pass					
	Unimpacted	2012	CA319	10	5.8	Pass					
	Unimpacted	2012	CA32	8	5	Pass					
	Unimpacted	2012	CA325	8	3.8	Pass					
	Unimpacted	2012	CA34	7	6.4	Pass					
	Unimpacted	2012	CA38	6	3.8	Pass					
	Unimpacted	2012	CA39	10	6.1	Pass					
	Unimpacted	2012	CA3B1	7	3.1	Pass					
	Unimpacted	2012	CA3B2	8	7.7	Pass					
	Unimpacted	2012	S345B6	9	7.6	Pass					
	<b>Unimpacted</b>	<b>2012</b>	<b>Annual Network Average</b>					<b>5.5</b>	<b>Pass</b>		
	<b>Unimpacted</b>	<b>2011 - 2012</b>	<b>Five-Year Network Average</b>							<b>5.4</b>	<b>Pass</b>
	<b>Unimpacted</b>	<b>2011 - 2012</b>	<b>3 of 5 Year Network Average ≤ 10 ppb</b>					<b>Pass</b>			

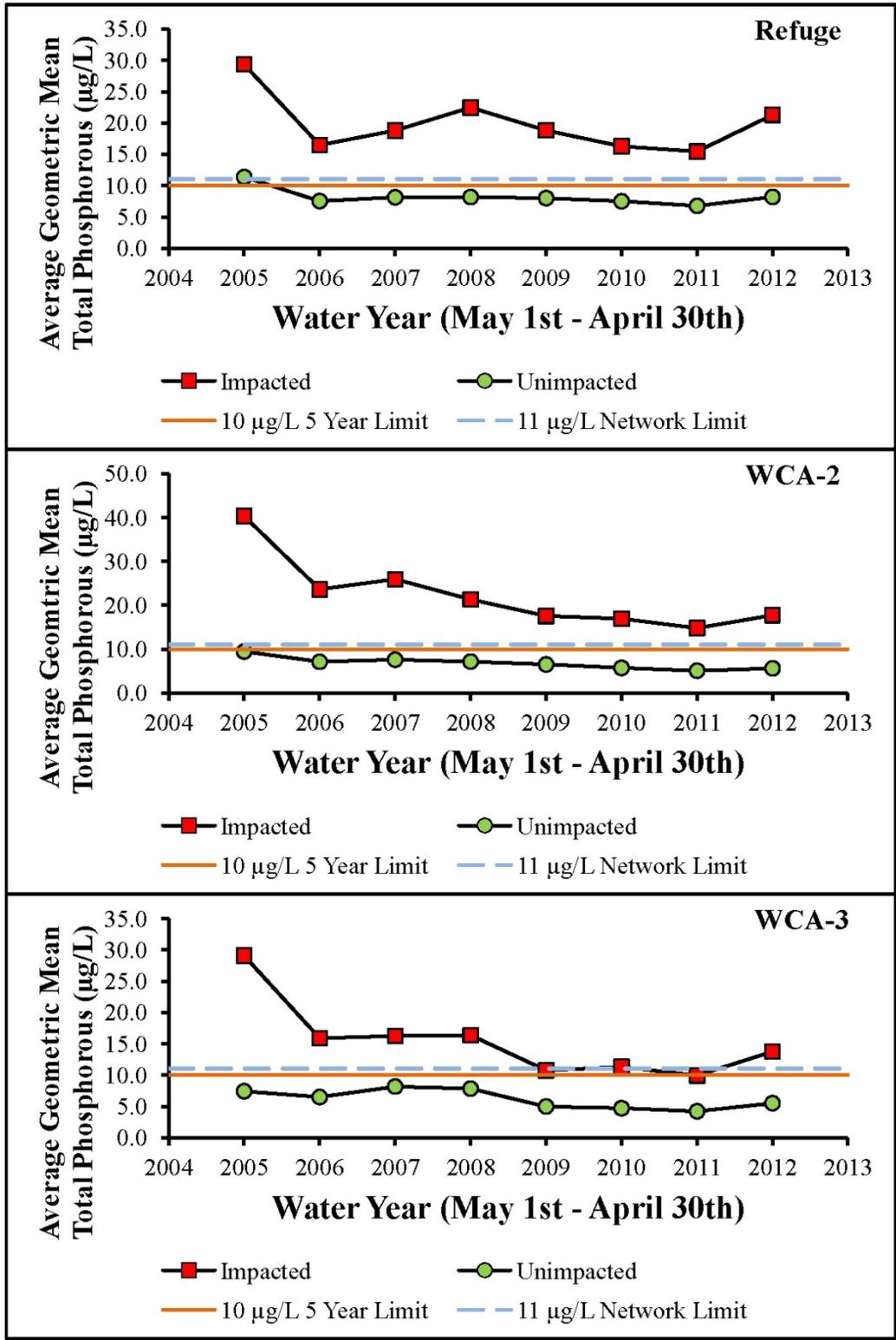
µg/L – micrograms per liter

N/A – Mean calculation not applicable

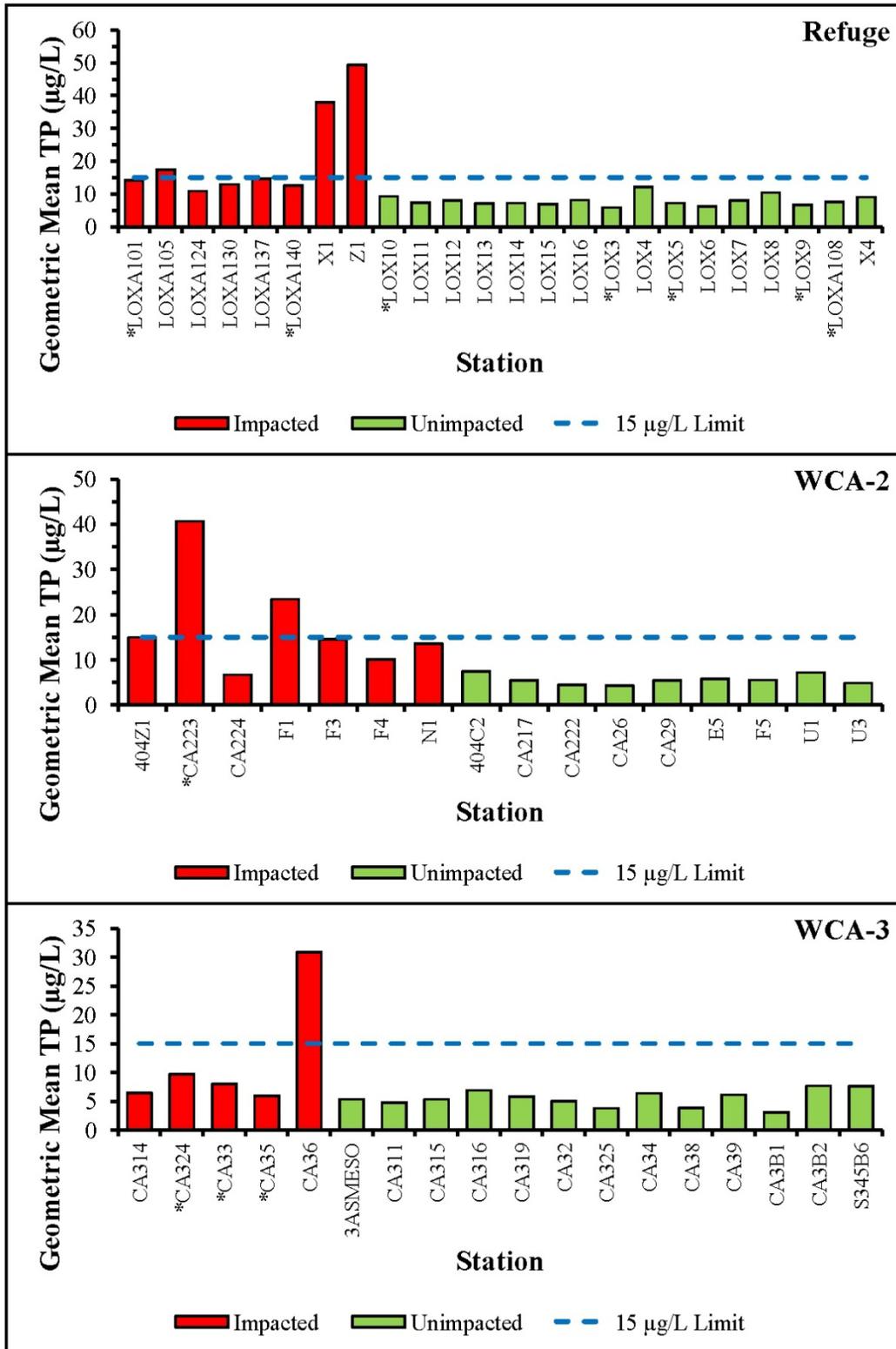
Refuge – Arthur R. Marshall Loxahatchee National Wildlife Refuge

WCA-2 – Water Conservation Area 2

WCA-3 – Water Conservation Area 3



**Figure 1.** Network (Impacted and Unimpacted) trends for the Refuge, Water Conservation Area 2 (WCA-2), and Water Conservation Area 3 (WCA-3) from WY2005 to WY2012 relative to the 10 µg/L long-term (5 Year) and the 11 µg/L network limits.



**Figure 2.** Total phosphorous (TP) geometric mean for each station during WY2012 for the Refuge, WCA-2, and WCA-3 relative to the 15 µg/L annual limit. Stations with less than six samples are identified with an asterisk (\*).